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Postsecondary transition services for students with autism spectrum disorder: An
occupational therapy approach

by

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A Scholarly Project

Submitted to the Occupational Therapy Department
of the

University of North Dakota

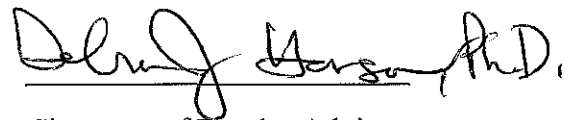
In partial fulfillment of the requirements
for the degree of
Master of Occupational Therapy

Grand Forks, North Dakota

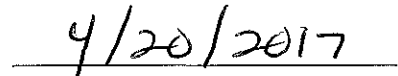
May

2017

This Scholarly Project Paper, submitted by Luke VanHavermaet, MOTS and Lynn Bielski, MOTS in partial fulfillment of the requirement for the Degree of Master of Occupational Therapy from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.

A handwritten signature in black ink, reading "Delroy Hanson Ph.D.", written over a horizontal line.

Signature of Faculty Advisor

A handwritten date "4/20/2017" written in black ink over a horizontal line.

Date

PERMISSION

Postsecondary transition services for students with Autism Spectrum Disorder: An occupational therapy approach

Department Occupational Therapy

Degree Master of Occupational Therapy

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ACKNOWLEDGMENTS

As the authors, we would like to express our great appreciation to our advisor, Dr. Debra Hanson, for her guidance and valuable input throughout the development of this scholarly project. We would also like to thank our families for supporting us throughout our time in the University of North Dakota Occupational Therapy program.

ABSTRACT

Problem: Individuals with Autism Spectrum Disorder comprise a rapidly growing population with approximately 1/68 children being diagnosed annually (CDC, 2016). Individuals with ASD often have difficulties with social interaction, sensory processing, emotional regulation and adapting to environmental changes (Rogers, 2010). Individuals who are diagnosed early in life are provided a wide variety of services to minimize these symptoms to maximize independence later in life, and in an academic setting. As individuals with Autism Spectrum Disorder come to the end of their K-12 education journey, the transition planning completed throughout the student's final year of high school are not carried out as support services are no longer required under law following graduation (IDEA, 2004). This lack of professional support following high school graduation may inhibit students' success and place distress on family members during the postsecondary transition.

Methodology: An extensive literature review was completed on the supports provided to students with Autism Spectrum Disorder as well as student and postsecondary faculty members' perceptions of the accommodations and experiences of this population at postsecondary institutions. The review demonstrated a lack of evidence supporting transition services for the ASD population during the transition from high school and postsecondary educational settings. The literature reveals a lack of communication between high school and postsecondary support professionals to facilitate ASD student transition.

The role of the occupational therapist in relation to ASD student transition is explored including their ability to analyze student's skills, everyday contexts and meaningful occupations and design accommodations appropriate to student's skills and abilities. In addition, occupational therapists knowledge of healthcare policy and their holistic view of individuals was noted as complimentary to the services already provided by existing support professionals. Promotion of occupational therapy services to professionals working in high school and post-secondary education settings was identified as central to establish the occupational therapy role in postsecondary transition services.

Product: A scholarly article was written to be published in a non-OT professional magazine to advocate for the integration of occupational therapy services into the postsecondary transition planning and implementation following high school graduation. The article introduces the reader to the gaps in transition services for the ASD population, provides an overview of the occupational therapy role, (based on the Person-Environment-Occupation (PEO) Model), provides a practice scenario demonstrating the value of the occupational therapy role in enhancing a student's emotional, social, academic and independent living skills during their post -secondary experience, and provides an overview of an existing transition program for reader reference.

CHAPTER 1

INTRODUCTION

Occupational Therapy (OT) practitioners offer a diverse set of services to assist individuals of all populations in maximizing their quality of life and daily independence. One population in particular, Autism Spectrum Disorder, is a rapidly growing population with approximately 1/68 children being diagnosed annually (CDC, 2016). Individuals with ASD often exhibit difficulties with social interaction, sensory processing, emotional regulation and adapting to complex environments (Rogers, 2010). Individuals who are diagnosed early in life are provided with a wide range of services to minimize these symptoms and to maximize independence later in life. Occupational therapy services can assist individuals with ASD in developing their abilities to interact socially with others, adapt to complex environments and to reduce behavioral outbursts (Rogers, 2010). Accommodations and transition services which are included in student's Individual Education Program (IEP) are forfeited once the student graduates or turns 21, whichever comes first (IDEA, 2004). A lack of professional support following high school graduation may inhibit students' success and cause distress among family members while transitioning to a postsecondary institution. Occupational therapy transition services would ensure that students' educational accommodations and recommendations which were implemented in high school are transferred to the postsecondary institution. In addition, OTs are skilled in assisting individuals in developing their social, community and independent living skills which would be a strong asset to the transition process.

Improved communication and collaboration between the high school IEP team and postsecondary disabilities services teams are essential to students' success.

This scholarly project includes a literature review to gain an increased understanding of the current barriers and challenges this population experiences throughout the postsecondary transition. The prevalence and common symptoms of ASD, current legal and support systems available, perspectives of postsecondary faculty and support services, and effective recommendations to promote academic, social and independent living success are explored. Following a review of the current literature, a product was created to communicate the valuable skills which OTs can bring to the postsecondary transition process for students with Autism Spectrum Disorder. The product includes a review of the current literature, a two-part case study to illustrate the role which OT practitioners can have in assisting students with ASD in building independent living skills outside of the traditional academic supports, and an overview of accommodations currently being provided during the postsecondary transition for students with ASD. Utilizing concepts from the Person-Environment-Occupation (PEO) Model, recommendations to improve students' academic, social, emotional and independent living skills prior to attending postsecondary institutions are discussed (Strong, 1999). The product was constructed to be published in a non-OT practice publication venue. A non-OT venue was selected in order to expand other healthcare and human services professionals' knowledge of the unique skills which OTs can bring to a transition services team to ensure that students thrive in the classroom as well as in the community.

Many factors were considered when creating a product describing best practice and the current issues and barriers of providing adequate transition services for students with ASD. The scope of occupational therapy is often misinterpreted by the public and professionals from multiple disciplines. The wide range of roles and responsibilities which OTs are able to serve makes it difficult for others to understand the purpose and language of the profession. When constructing the product, it became increasingly important to communicate the specific skills which OTs can bring to the professional support team to improve students' skills outside of academics. Utilizing and explaining concepts of the PEO model within the product gave other professionals a basic understanding of the principles of occupational therapy as well as strengthen the credibility of recommendations and accommodations suggested in the product.

Another factor influencing the application of the product was determining which non-OT professional venue would be most valuable and impactful on role of OT during the transition process. A non-OT venue was desirable as the role of OT is often misinterpreted by many professionals and change will most likely occur when professionals outside of the OT field are educated on the unique skill sets of OT practitioners. The venue search was tailored towards professional publication venues in which the audience is primarily special education faculty, counselors, psychologists or post-secondary disabilities service professionals. Researching each venues' qualifications of publication as well as their intended audience was essential to ensure that the product reaches individuals who work directly with students with ASD throughout the transition process.

The Person-Environment-Occupation (PEO) Model was utilized to structure the content and product included in this scholarly project. By implementing a transactive approach throughout the therapy process, therapists are able to analyze the transactions between the person, environment and occupation (Turpin & Iwama, 2011).

Accommodations and modifications are implemented to reduce barriers within these transactions to “maximize fit” between the person, environment and occupation, leading to increased independence and engagement in “occupations” or daily tasks (Turpin & Iwama, 2011). A literature review was conducted relative to analyze common symptoms and barriers which students with ASD experience in postsecondary settings, students’ and professional support personnel's perspectives of the postsecondary transition process, environmental supports and accommodations available to students with ASD, and current legislation affecting the transition process. Application of the PEO model was illustrated in a two-part case study example to demonstrate an OT’s approach to evaluating a student’s personal challenges, level of professional support and other environmental factors when engaging in academic, social and independent living occupations in postsecondary settings. The writers used the data from the PEO transactions in the case study to demonstrate how an OT practitioner can create recommendations for students with ASD during the transition process when guided by application of a model.

Students with ASD will be required to engage in many occupations throughout the college transition whether they are prepared for these situations, or not.

Implementing a simple and flexible model such as the PEO model would be an important step in determining challenges which students experience, and how the environment is impacting their ability to successfully engage in meaningful occupations. Developing an

understanding of factors which are impairing a student's ability to succeed in a postsecondary environment will allow the therapist to make modifications and accommodations to maximize "fit" and occupational performance (Turpin & Iwama, 2011).

Key Terms & Concepts

Americans With Disabilities Act (ADA) - "The Americans with Disabilities Act (ADA) prohibits discrimination against people with disabilities in employment, transportation, public accommodation, communications, and governmental activities. The ADA also establishes requirements for telecommunications relay services" (ADA, 2008).

Certified Occupational Therapy Assistant (COTA)- Health care professional who work under the supervision of a certified occupational therapist to assist individuals in becoming independent in their daily routines and occupations.

Community and Technical College- An academic institution requiring a two years of education credits.

High Functioning Autism Spectrum Disorder- Individuals who are diagnosed as "high functioning", also known as High Functioning Autism Spectrum Disorder (HFASD), are most often verbal, have little to no deficiency in IQ, but may have decreased social skills and difficulties adapting to unstructured environments (Rogers, 2010).

Individuals with Disabilities Education Act (IDEA)- Federal law stating public schools providing K-12 education must provide free and appropriate education to qualified persons with a disability, regardless of the severity or nature of the disability (IDEA, 2004)

Individual Education Plan (IEP)- Education plan formulated throughout students K-12 education by a team of professionals to accommodate students' specific needs to ensure each is provided with appropriate supports and modifications in order to maximize their learning potential (IDEA, 2004).

K-12 Education- Kindergarten through 12th grade education.

Low Functioning Autism Spectrum Disorder- Individuals who are diagnosed with "low functioning" ASD are most often nonverbal, display highly repetitive movements or verbal statements and may demonstrate frequent behavioral outbursts (Rogers, 2010).

Occupation- the cornerstone of the occupational therapy profession defined as the daily tasks and activities making up individual's daily habits and routines.

Occupational Therapist (OTR/L)- Health care professionals who utilize clinical reasoning to evaluate and treat individuals to maximize their independence in daily occupations and routines.

Post-Secondary Education- Any form of higher education completed following graduation from a secondary institution

Secondary Education- A term used to describe High School Education

Sensory Defensive- Individuals who are sensory "defensive" or sensory "sensitive" may experience tactile defensiveness where they may avoid being touched by others, certain types of clothing, or certain textures (Kern et al., 2006).

Sensory Seeking- Individuals who are sensory "seeking" where may become fixated on seeking out a variety of sensory stimuli to increase the amount sensory input to their nervous system (Rogers, 2010).

University- An academic institution requiring four years of education credits.

The sections to follow will provide a thorough review of the current evidence available supporting the occupational therapy role as well as a product providing recommendations to increase students with ASD success during their postsecondary transition. The topic will be introduced through a literature review discussing the prevalence and symptoms of ASD, student and professional support personnel perspectives on the postsecondary transition, and effective recommendations and accommodations to increase students' success in academics, social participation and independent living. The methodology explaining the process for design of this scholarly project will then be summarized. In addition, a brief description of the products and recommendations suggested by the graduate students will be described as well as the purpose and potential impact this project could have on the occupational therapy profession.

CHAPTER II

REVIEW OF LITERATURE

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder affecting approximately 1 in 68 children (Centers for Disease Control and Prevention [CDC], 2011). An individual will often exhibit deficits in their ability to function independently in the community due to a tendency to avoid social interaction and difficulties with adapting to social norms and expectations (CDC, 2016). “People affected by ASD may also exhibit patterns of repetitive body movements or obsessional thinking, lack of eye contact, difficulties adapting to change in daily routine, motor awkwardness, or learning disabilities” (CDC, 2016). Furthermore, conditions such as anxiety and depression are commonly associated with individuals with ASD contributing to further complications when attempting to integrate individuals with ASD into a postsecondary setting (Geller & Greenberg, 2009; Johnson & Irving, 2008).

Individuals with ASD each present with a unique set of symptoms also known as “the spectrum”, ranging from “high functioning” to “lower functioning”. Individuals who are diagnosed with “low functioning” ASD are most often nonverbal, display highly repetitive movements or verbal statements and may demonstrate frequent behavioral outbursts (Rogers, 2010). Individuals who are diagnosed as “high functioning”, also known as High Functioning Autism Spectrum Disorder (HFASD), are most often verbal, have little to no deficiency in IQ, but may have decreased social skills and difficulties adapting to unstructured environments (Rogers, 2010).

For someone with ASD, friendships and networking opportunities may be limited as often times their speech, and effective communication skills can be negatively affected (Hewitt, 2011). Monotone voice, overly advanced vocabularies, or difficulties interpreting sarcasm and humor are just a few irregular social behaviors individuals with ASD may exhibit (Adreon & Durocher, 2007; Gobbo & Shmulsky, 2012). Other irregular social behaviors which those with HFASD may struggle with are interpreting peers' emotions and personal insight when engaging in conversation (Gobbo & Shmulsky, 2012). These tendencies can cause an individual to "shut down", become aggressive, avoid social situations, or feel threatened by conversation.

In addition to social challenges, individuals with ASD may experience sensory defensiveness, or sensory seeking behaviors (Johnson & Irving, 2008; Kern et al., 2006). Someone who is sensory "defensive" or sensory "sensitive" may experience tactile defensiveness where they may avoid being touched by others, certain types of clothing, or certain textures (Kern et al., 2006). Others may be sensory "seeking" where they may become fixated on seeking out a variety of sensory stimuli to increase the amount sensory input to their nervous system (Rogers, 2010). People with Autism who exhibit sensory defensiveness or sensory seeking behaviors can become so fixated on a stimulus (sound, smell, texture) that they may appear to become unaware of their surroundings or become highly agitated and uncomfortable. Sometimes, someone with ASD may even exhibit sensory defensiveness and sensory sensitivity simultaneously (Kern et al., 2006). Individuals with ASD experience sensory defensiveness or a tendency to avoid highly stimulating environments such as large crowds of people or rooms with humming of fluorescent lights (Johnson & Irving, 2008).

According to the Center for Disease Control (2016), 50% of the individuals with ASD fall within average range or higher on intelligence tests, classifying them as “high functioning”. Although an individual is classified as having high functioning autism, he/she may still experience deficits in their ability to manage daily living skills and adapt to unpredictable environments (Duncan & Bishop, 2015). The symptoms discussed above can have a large impact on the ability of students with ASD to transition to and participate within a postsecondary education institution.

Summary of Introduction/Academic Challenges

Shattuck et al., (2012) reported in 2012, 12.1% of students in the United States diagnosed with autism spectrum disorder went on to attend a four year university while 34.7% of students attended either a 2-year or 4-year institution. The researchers also asserted that more than 50% of students reported no participation in postsecondary education or employment two years following high school suggesting problems with the transition process. Adreon & Durocher (2007) anticipate the number of students with ASD who attend community college or a university is going to continue to rise due to an overall increase in public awareness of the disorder, and recent improvements to the process of diagnosing symptoms related to High Functioning Autism Spectrum Disorder. As many as 1.9% of students enrolled in postsecondary education may be experiencing symptoms and challenges related to HFASD, but will not receive a formal diagnosis until a major learning set back occurred. As a result, these students may be at a disadvantage to reach their full potential without utilizing resources to modify their environment in order to cope with learning obstacles related to HFASD. (Barnhill, 2016; Gobbo & Shmulsky, 2012; 2013). Furthermore, upon receiving a formal diagnosis, postsecondary

institution support professionals and their faculty report they do not clearly understand how to best serve, and retain their students who have HFASD (Zager & Alpern, 2010). Individuals with ASD have a high academic potential however their inability to adapt to and engage in a social and highly stimulating college environment may inhibit their ability to achieve academic success (Geller & Greenberg, 2009).

Students with ASD are required to overcome many obstacles when attending a college or university as the symptoms and abilities of students with ASD can vary greatly. Individuals with ASD have a high academic potential however their inability to adapt to and engage in a social and highly stimulating college environment may inhibit their ability to achieve academic success, and often results in the student dropping out of school (Geller & Greenberg, 2009; Glennon, 2016; VanBergeik et al., 2008). Many students with ASD thrive academically in high school; where academic content is highly memorization based and the personal supports provided make it a highly structured environment, compared to when a student attends a highly unstructured college environment where they begin to experience barriers to their learning and independence. (Hewitt, 2011; Geller & Greenberg, 2009). In addition to difficulties with flexible problem solving, students reported feeling overwhelmed by the large amounts of information and demands causing them to procrastinate when completing daily tasks and assignments (Hees, Moyson, & Roeyers, 2015).

Instructors report being able to identify when students are experiencing high anxiety as students often display behaviors such as decreased eye contact, rigid body language or attempts to isolate themselves by leaving the room (Gobbo & Shmulsky, 2014). Brown & Coomes (2016) found that most 2-year colleges frequently use one on

one instruction for students with ASD as they may experience emotional and psychological distress as a result of a variety of sensory stimuli present in larger classrooms as well as social environments throughout campus. For those who experience sensory defensiveness, difficulties with concentrating during tests and lectures, an increased risk of social isolation, and lack of initiative to seek support may result (Johnson & Irving, 2008). Gobbo and Shmulsky (2014) identified other challenges for students with ASD as difficulties establishing appropriate discussion boundaries, misunderstanding verbal cues and insight of peers and faculty, as well as experiencing difficulties with following a daily routine and assignment instructions.

Much of the current literature on students with ASD attending a college or university indicates students' ability to adapt to their environment as the primary source of decreased academic success. Common challenges experienced by students while attending college including sensory defensiveness, decreased organization and flexibility, and impaired social skills (Gelbar, Smith, & Reichow, 2014; Hees, Moyson, & Roeyers, 2015). Although many students may be experiencing academic success prior to admission to college, it is essential for students to communicate with faculty members to ensure they are receiving support services in order to address other social or psychological factors that may hinder academic success if not addressed early on during their postsecondary journey (Hewitt, 2011).

Social Obstacles

Students with HFASD who attend college may have difficulty balancing coursework and the potential for independent living due to the many academic and non-academic obstacles that may arise when seeking to understand and experience the social

and cultural environments of their institution (Barnhill, 2016). Difficulties engaging in social interaction as well as the high amount of stimulation associated with these environments makes it difficult for individuals to succeed in college (Hees, Moyson, & Roeyers, 2015).

Misunderstanding the social and cultural obstacles of attending a 2-year or 4-year postsecondary institution can affect students' relationships with peers and faculty as well as participation in extracurricular activities. An inability to connect with others may also cause them to avoid seeking new social relationships with peers or support professionals, which is essential to their well-being as a college student (White et al., 2011). People with HFASD may also experience emotional distress as a result of their social participation limitations. In a systematic review by Shmulsky & Gobbo (2013), 53% of community college students with ASD reported experiencing loneliness, while 47% experienced depression related to social participation. In addition, some students also expressed feelings of isolation and marginalization, as well as concerns about living independently with a roommate (Shmulsky & Gobbo, 2013).

Behaviors commonly associated with HFASD may also inhibit a student's engagement in extracurricular activities on campus such as joining clubs, organizations or attending campus associated social events. Students often develop rigid, restricted, and repetitive set of activities, making social and extracurricular participation with peers an obstacle (Adreon & Durocher, 2007). As a result, students with HFASD who have attended a community college or university reported that they had found other avenues to spend social energy, instead using their time to develop self-awareness rather than focusing on social interaction (Drake, 2014). The development of self-awareness was

beneficial to the students as it provided them a means to explore school options, career choices, and other life decisions as they became more independent (Drake, 2014).

Although some students experience depression and anxiety as a result of the social setting of college, others reported they had a love for learning and campus involvement during their time in college (Drake, 2014). The wide range of interests, needs and abilities justifies the importance of providing individualized assistance for each student so that they may reach their full potential.

Transition to Postsecondary Education

The transition process from secondary to postsecondary for students with Autism Spectrum Disorder is a complex process guided by both federal and state law. Students with autism spectrum disorder are protected under the Individuals with Disabilities Education Act (IDEA, 2004) from ages birth to 21. Under IDEA (2004), public schools providing K-12 education must provide free and appropriate education to qualified persons with a disability, regardless of the severity or nature of the disability. When students utilize special education services at their high school, each will develop an Individualized Education Plan (IEP) (IDEA, 2004). The IEP is formulated by a team of professionals to accommodate students' specific needs to ensure each is provided with appropriate supports and modifications in order to maximize their learning potential (IDEA, 2004). When these students transition to a postsecondary institution, or turn 21, they are no longer protected under IDEA, instead they are protected by the American's with Disabilities Act (ADA, 2008). Under ADA (2008) students who have been diagnosed with ASD are granted the right to "reasonable accommodations" at the postsecondary institution at which they enroll, however, the student must seek out the

institution's disability services center to receive supports and accommodations. Due to a lack of social skills and a tendency to avoid social contact, students with HFASD will often be hesitant to disclose their diagnosis or self-advocate for their learning obstacles to support professionals (Aderon & Durocher, 2007). Glennon (2016) asserted that there is a break in communication between high school advisors and postsecondary institution faculty and support professionals regarding student's academic, social and life skills needs. The researchers found only 21% of college support professionals are addressing the needs and accommodations for which students with HFASD self-advocated and high school faculty may have mentioned.

Student success is determined by the college support personnel's ability to determine the best fit between the student's needs and educational goals by providing reasonable accommodations as necessary. The importance of determining a good fit for the student prior to attending an academic institution emphasizes strong communication, planning and support with college support professionals prior to selecting a school (Barhnill, 2016). Brown and Coomes (2016) found that strong interprofessional communication and teamwork between campus personnel including faculty, disabilities services, student involvement, career services, etc. is crucial to students campus involvement and holistic experience. Adreon & Durocher (2007) assert that community colleges may be a more supportive learning environment for students with HFASD to begin their postsecondary journey in comparison to attending a four year university. Community colleges offer a unique ability to provide more individualized support, smaller campus and classroom sizes, and more flexible living arrangements (Adreon & Durocher, 2007).

Furthermore, students with ASD may view a technical degree requiring more structure than a professional career as a more optimal fit for their unique set of skills (Adreon & Durocher, 2007). Adreon & Durocher (2007) recommended that students begin their postsecondary journey at a 2 year community and technical college in order to accommodate the variety of challenges for students on the spectrum. Not only does the student have an ability to advance to a four year degree, but he/she may have a more supportive environment to cope with the emotional and social challenges of a campus environment in order to promote success (Hewitt, 2011). A drawback of students with ASD attending a two year community college is that the student may perceive he/she “stands out” more so than if they were attending a larger university (Adreon & Durocher, 2007).

To enable faculty members to prepare themselves for incoming students with Autism Spectrum Disorder and other learning disabilities, there must be strong communication between the student’s high school IEP team and the postsecondary institution’s disabilities office and/or faculty members. Postsecondary faculty members reported having difficulties accommodating students on the spectrum as the communication with the students’ high school special education providers was not adequate to provide modifications specific to the student given he/she had disclosed their diagnosis upon admission (Janiga & Costenbader, 2002). Cai & Richdale (2016) noted many positive supports and reviews of faculty supports being implemented on campus, however, negative experiences were discussed such as students not receiving timely support due to lack of resources and knowledgeable personnel, inability for staff to

intervene without disclosure of ASD diagnosis and a generally negative attitude from staff.

As students begin their transition from high school to a community college or university setting an inability to understand the unwritten rules of college compared to those of high school may hinder students' success. Examples include knowing how and when to interact during class discussion, initiating social relationships, asserting their needs and challenges to faculty members or navigating a dynamic and stimulating campus environment (Glennon, 2016). Although many of these barriers are addressed in the students' IEP prior to postsecondary admission, lack of communication during the college transition results in college faculty never seeing this valuable information provided in students' IEP (Janiga & Costenbader, 2002; Glennon, 2016; VanBergeijk et al., 2008).

Postsecondary Support System

Not only is support during the transition planning essential, but supports received while attending a postsecondary setting are equally as important. Postsecondary faculty members play an important role in providing a supportive and structured environment for students with autism spectrum disorder in order to promote academic success (White et al., 2011). Brown & Coomes (2016) found approximately two-thirds of 2-year postsecondary institutions provided higher level accommodations including sensory modifications and transition programs, while almost all institutions implemented basic accommodations used for a variety of learning disabilities. Students with ASD require a wide range of supports throughout their college experience to ensure they are fulfilling

their academic potential, as well as building meaningful relationships and living in the least restrictive environment.

Swift (2012) found that one of the biggest challenges for postsecondary faculty members is to connect with and provide meaningful modifications for students on the autism spectrum. The Americans with Disability Act (ADA, 2008) requires all postsecondary institutions to provide “reasonable accommodations” to all students with disabilities upon request. Faculty education on the provisions of ADA is essential to students’ success. VanBergeijk et al., (2008) suggest that a majority of faculty members have limited knowledge on beneficial modifications for students with ASD as well as their rights to these modifications provided in the ADA. Approximately 63% of faculty members demonstrated limited knowledge of the ADA and suggested they would benefit from further education on the provisions of this act (Glennon, 2016). Reasonable supports, alternative teaching styles, and classroom modifications specific to each students were common themes regarding academic supports contributing to reduced anxiety and distress in students with ASD when provided in a timely fashion (Cai & Richdale, 2016). Furthermore, Janiga & Costenbader (2002) asserted that when postsecondary faculty members received education about how to assist students on the autism spectrum, they were at times reluctant to “buy into” and understand methods and strategies to accommodate the ASD population. In addition, university support professionals reported little satisfaction when asked about the level of support provided to students on the spectrum (Janiga & Costenbader, 2002).

Students’ decreased ability to assert their needs and initiate conversation, may act as a barrier when determining whether or not to disclose their diagnosis to disability

services and faculty (Cai, 2016; White et al., 2011). Faculty knowledge on student rights and provisions of the ADA is not relevant if students are not disclosing their diagnosis upon admission to a postsecondary institution. Students' potential for success in college is often measured by students' academic success in high school. Students with HFASD who succeed academically in high school may go undiagnosed well into their postsecondary experience (Cai, 2016; White et al., 2011). White et al. (2011) found that students often disclosed their diagnosis to the disabilities office, but did not disclose their diagnosis to faculty or peers in fear of being socially excluded, triggering recurring thoughts about negative experiences and fear of stigma attached to their ASD diagnosis. Geller and Greenberg (2009) reported that campus disabilities offices are much more knowledgeable about accommodations and supports for students with learning disabilities and physical disabilities than they are for students with behavioral or cognitive disabilities.

Recommendations for Support

Social Support

There is limited research supporting ways in which to promote and encourage healthy social engagement for students with ASD, specifically students with ASD who attend a university setting (Hees, Moyson & Roeyers, 2015). This is an issue which was mentioned by a student who was interviewed in a study by Hees et al., (2015):

“People with ASD definitely have a need for social contact. The problem is that, at a very fundamental level, we do not know how to achieve this. I just keep thinking how to react in social situations.” -Student

Individuals with ASD would benefit from specific recommendations such as to how to participate in a social university setting as they often struggle with interpreting others' insight during conversation, following discussion boundaries, implementing appropriate pace during conversation, or maintaining eye contact (Gobbo & Shmulsky, 2012). When students are engaging in social situations in which they feel ill-equipped, debilitating anxiety can develop and the student may become socially disengaged, perseverative, rigid, aggressive, depressed or even more socially awkward (Barhnill, 2016; Gobbo & Shmulsky, 2012; White et al., 2011; Schulsky & Gobbo, 2013). There are recommendations in the literature addressing disability support professionals and family members' ability to promote social skills development for students with ASD. When these recommendations are implemented appropriately students report that they develop a love of college, their campus experience, and a love of learning (Drake, 2014).

There are few approaches cited in the literature which college support staff can implement to assist a student in engaging in the social context of higher education. One of the approaches referenced in the literature supports the idea of providing a student with one person on campus, either a peer mentor or disability services employee, who would be able to advise them in a 1:1 social setting. The student would benefit from meeting this person of contact prior to attending college, preferably in his or her senior year of high school (Aderon & Durocher, 2007). This 1:1 meeting approach would consist of a non-threatening, predictable means of providing the student with feedback and social guidance regarding the transition to college, post-secondary learning, social skills instruction, and life skills. (Aderon & Durocher, 2007; Barnhill, 2016). Students would also discuss social feedback they received from faculty and peers, review relationship

building skills, or simply receive emotional support when meeting with their 1:1 support person (Barnhill, 2016).

Implementing a 1:1 peer or faculty meeting schedule with the student could provide opportunities for development of social skills as there are ways in which social scenarios can be practiced through video modeling, social stories, cognitive behavioral interventions and providing feedback (Gellar & Greenberg, 2009; Glennon, 2016; Mason et al., 2012; Pugliese & White, 2013). In these meetings, students will be encouraged to practice using spontaneity, clarify ambiguities or sarcasm, and provide and receive feedback (Hees, Moyson & Roeyers, 2015). Peer mentors or support professionals can also assist students in engaging in online chat systems, or other virtual communication platforms as students with ASD have reported virtual means of communication are “worthwhile and easier” (Hees, Moyson & Roeyers, 2015).

Support mentors or professionals may provide the student with opportunities to develop and plan leisure and social activities independently (Gellar & Greenberg, 2009). It is important for students to engage in leisure activities not only to socialize, but also as a stress management technique in a rigorous college environment (Hees, Moyson & Roeyers, 2015). Students reported group work and social events planned by student unions were highly stressful to participate in (Hees, 2015). Empowering the student to determine which social events they engage in is beneficial as they become the director of their social life. Allowing the student and mentor to collaborate about leisure activities ensures the activities will be highly predictable and structured, if necessary (Drake, 2014; Hees, 2015). Highly structured and supported social activities, volunteer opportunities, and job experiences provide an excellent means to allow the student to continuously

develop social skills and an appropriate understanding of the social world (Geller & Greenberg, 2009). It's also important to note that as the student improves socially, the amount of support and feedback they receive should gradually decrease. Too much social support from mentors and families has been shown to inhibit the students' potential for social growth. It is crucial that there is a balance between the amount of support provided to the student so that the student can learn from their mistakes (Geller & Greenberg, 2009; Hewitt, 2011).

It is important that support professionals and mentors are available at the postsecondary institution, however when students return home, their parents have been reported as being one of their biggest emotional support systems and social advocates (Cai & Richdale, 2016; Camarena & Sarigiani 2009; Brown & Coomes, 2016; Geller & Greenberg, 2009; Hees et al., 2015). Students with ASD report the benefit of having a family member, especially mothers, as support systems and caregivers, even after they leave for college (Hees et al., 2015). Parents take an active role in advocating for their child's needs as they transition to college, as the student may not have the social skills to disclose their need for support (Cai & Richdale, 2016). Parents have been noted to encourage the college experience for their loved one with ASD as it provides them with an opportunity to "get more people experience" before entering the workforce (Camarena & Sarigiani 2009). Evidence supports the use of familial support socially, emotionally, and academically as it promotes student's independent functioning later in life (Brown & Coomes, 2016). It's recommended to encourage emotional and social support from family members as students with ASD attend college, as well as provide adequate outside support for the family members. Family members are likely to become stressed and

fatigued as they take an active role in advocating for their college aged loved one (Geller & Greenberg, 2009).

Academic Support

Current literature regarding the experience of someone with ASD who attends college has provided an abundance of recommendations for college faculty and disability service centers to accommodate to the unique needs of this population. Many of these recommendations are centered around adapting students' environment in order to achieve their academic potential. Common accommodations include providing additional time for examinations, taking tests in rooms separate from classmates and completing assignments individually instead of in a group. (Brown & Comes, 2016; Hees et al., 2015). A systematic review revealed the most common accommodations for students with ASD; the top three included extra time on exams (67%), lecture notes from instructors (56%), and separate test locations (33%) (Gelbar et al., 2014). Cai & Richdale (2016) assert that disabilities support staff often take on an advocacy role for students with ASD by educating faculty and peers on campus, as well as referring students for additional services as needed. Providing outlines or using audio recording for note taking, wearing earplugs to minimize distraction, providing visuals to present course content, and collaborating with students to develop a weekly planner are all ways to improve students time management, focus and productivity (Gobbo & Shmulsky, 2014; VanBergeijk et al., 2008). Brown and Comes (2016) highlighted that accommodating for students' individual needs through one on one consultation is the best practice when working with students at a community college.

Brown and Comes (2016) also asserted the importance of educating faculty as well as other academic supports such as counselors and tutors on the common symptoms and appropriate intervention techniques when students begin displaying disruptive behavior in the classroom. Incorporating structure into lecture material to improve predictability, using a concrete communication style, and becoming familiar with students' behavior and triggers can provide a more supportive learning environment as well as prevent potential behavioral changes before they occur (Gobbo & Shmulsky, 2014). Critical thinking skills can be enhanced by having students brainstorm ideas by breaking down topics into more basic and concrete questions (Gobbo & Shmulsky, 2012). In order to identify environmental challenges and assess the student's ability to perform in an unstructured postsecondary setting, students may benefit from attending classes on a college campus alongside their peers under the supervision of their high school paraprofessionals (Zager & Alpern, 2010).

Life Skills

Although there are many factors that can affect students' academic performance, education is just a small part of the postsecondary experience. Campus disability services are much more equipped to make accommodations to enhance students' academic success than they are to accommodate for factors such as difficulties with social skills, independent living tasks and work experience (VanBergeijk et al., 2008). Students attending a college or university are required to independently make decisions and problem solve by managing their time effectively, completing and submitting assignments before deadlines, planning and preparing meals, and managing their finances (Adreon & Durocher, 2007).

Students' difficulties with time management and adapting to unstructured environments and tasks puts them at risk of being unprepared to live independently upon arrival to campus. In order to cope with the increased demands and an unpredictable lifestyle during the college transition, students have recommended attending a university or college close to their family members for continued support (Hees et al., 2015). In addition, students reported getting involved with leisure activities and exploring activities outside of their interest areas as strategies to reduce stress and anxiety throughout the transition process (Hees et al., 2015). It is strongly suggested that students begin their post-secondary journey at a 2-year college close to home as community colleges offer smaller class sizes, increased one on one interaction and opportunity to pursue a technical career or advance to a 4-year institution. In addition, students have an opportunity to experience campus living or they can continue to stay with family members and to maintain a familiar routine (Aderon & Durocher, 2007; Hewitt, 2011). Gelbar et al., (2014) asserted that while many of these recommendations are valuable to professionals who are attempting to determine effective accommodations for students with ASD on college campuses, there is a greater need for studies exploring empirically-based recommendations.

Role of Occupational Therapy

Occupational therapy (OT) practitioners, Registered and Licensed Occupational Therapists (OTR/L) as well as Certified Occupational Therapy Assistants (COTA) utilize clinical reasoning skills to identify an individual's strengths and weakness while performing their "occupations" or tasks to maximize their ability to carry out their daily routines. OT practitioners utilize theoretical models to guide their reasoning while

interacting with individuals to recognize factors outside of academics which must be addressed to promote success. OT practitioners recognize that social, cultural, and environmental factors are areas in which should be addressed to meet the needs of the student prior to attending a postsecondary institution. A holistic approach to the transition process can be implemented with guidance from a model derived from the practice of occupational therapy.

The person-environment-occupation (PEO) model serves as a valuable tool when structuring occupational therapy transition services for students with Autism Spectrum Disorder. This approach focuses on breaking down the concepts of the Person, Environment, and Occupation to guide the therapeutic process and ensure client-centered practice (Strong et al., 1999). In the case of transitional services, therapists utilize the PEO model to evaluate students' needs related to the postsecondary transition process. For a student with ASD who is transitioning to a postsecondary institution, an occupational therapist would gather information about the "person" by analyzing the student's sensory abilities, academic and social interests, personal values, problem solving skills, and decision making skills related to academia and independent living tasks. The therapist would then focus on the student's environments in which he/she engages with on a daily basis. Special attention would be directed on the physical and social characteristics of the environment such as the amount of sensory stimulation in a cafeteria, amount of group work for postsecondary courses, or students' ability to maintain attention and stay on task with class assignments. Finally, the therapist would evaluate the occupational demands or needs required to perform tasks effectively such as

the skills required to efficiently study coursework, manage a course load, or meet course requirements (Strong et al., 1999).

The personal (psychosocial, physical, behavioral, cognitive), environmental (institutional, physical, social, socio-economic, cultural), occupational (academic, social, independent living) factors are interdependent and trans-active upon each other. Positive change in academic, socialization and independent living will be facilitated by the therapist's ability to "maximize the fit" between person, environment and occupation (Strong et al., 1999). Applying an occupational therapy based model enables occupational therapists to utilize a top-down approach to evaluate the root causes of the barriers to academic success (occupational engagement) for students with ASD. Throughout the transition, students will encounter many complex scenarios and participate in different activities (individual transactions) which may or may not inhibit students' occupational engagement (academic, social and independent living success). Evaluation of the transactions between the person-environment, environment-occupation and person-occupation will serve as a guide to aide an OT practitioner in developing a broad focus of postsecondary transition services which can be implemented to reduce barriers to students' success.

A review of relevant literature suggests that students with ASD are struggling to experience a successful transition between high school and postsecondary institutions, demonstrating a need for reform to the current transition process. Occupational therapists would strengthen any transition planning, IEP, or success center team as they are highly skilled in evaluating student's academic experience as well as social, emotional and independent living experiences to ensure a meaningful postsecondary experience. OT

practitioners' ability to use clinical reasoning to break down the tasks acting as barriers to their academic, social and independent living success justifies their potential to become a valuable asset in the transition process. The occupation-based approach and utilization of professional models to structure treatment makes occupational therapy unique, and serves as an asset on transition teams. Evidence suggests that current transitional support teams lack confidence and feel unprepared to assist a student population with ASD in an academic setting (VanBergeijk et al., 2008). With the addition of an occupational therapist to the transition team, the student would benefit by experiencing more success in college as the team will gain a holistic understanding of the student's needs, instead of focusing solely on academic related needs as discussed in their IEPs prior to transition.

There is a need to bring awareness to the distinct value occupational therapists can provide to any academic transition team for students with ASD. Current literature regarding the transition process for students with ASD commonly references viewpoints of academic success center employees, parents, students, high school counselors, and case managers; it rarely references the utilization of occupational therapists in transition planning. This is alarming as after a thorough review of the literature, the distinct need and value of an OT practitioner on an IEP team becomes evident. OT practitioners can assist the team in promoting a student's lasting academic success far beyond high school graduation by focusing on essential social, emotional and independent living skills outside of academics. A proposed solution to improve the transitional process for students with ASD includes advocating for the role of occupational therapists in non-occupational therapy publication venues. A product was created by graduate students and it is included in this scholarly project to promote the value which OT practitioners

can provide in collaboration with other support professionals who work on transition planning teams for students with ASD.

CHAPTER III

METHODS

Overview of Product

An article was written to promote the value of Occupational Therapy relative to the transition of a student with ASD from high school to post-secondary education. The product begins with a comprehensive literature review to emphasize the current challenges experienced by students with ASD in their transition, then shifts to a full description of an occupational therapy role, followed by a case study illustrating occupational therapy intervention. Last, a postsecondary transition program is introduced. The “Bridge Program” exists to increase a student’s ability to acclimate to the campus environment at Colorado State University.

The literature review process for this product began through use of search engines such as Google Scholar, Academic Search Premier, American Journal of Occupational Therapy. Key search terms included: *Autism Spectrum Disorder, transition services, special education, prevalence, support staff, ADA, IDEA, IEP, postsecondary, technical college and university*. Information was gathered regarding information about the prevalence of this disorder, specifically as it relates to the educational setting; information regarding current legal and support systems in place; perceptions of students and faculty who experience or have experienced this transition first-hand, and publications which suggest recommendations to assist such a population in this transition. Information was then condensed into a literature review.

Following a review of the literature, the graduate students selected an occupation-based model to organize the structure and content of their product. The textbook, *Using Occupational Therapy Models in Practice* was reviewed to determine the model best that best addresses the objectives and content of the product and scholarly project as a whole (Turpin & Iwama, 2011). The Person, Environment and Occupation (PEO) model was selected as it address all aspects of the person and environment to maximize occupational engagement during students' meaningful occupations (Turpin & Iwama, 2011). This model was continually referred to by graduate students throughout the development of this scholarly project.

Following the selection of an occupation-based model, a search was completed to determine any model programs addressing postsecondary transition services for this population which were currently being implemented in the United States. Graduate students were informed by their academic advisor about the "Bridge Program" currently being implemented at Colorado State University. An online search of the program's website was completed and referenced when designing the product.

A search was conducted for a publication venue. Non-OT professionals who assist this population were also contacted via word of mouth and e-mail to identify additional potential venues. The University of North Dakota librarian was contacted to assist in identifying potential venues which met the requirements of the product. The researchers created the following inclusion criteria when selecting a publication venue:

1. Must be a non-OT publication, to ensure that the value of OT was disseminated to other support professionals involved in the transition process

2. Must be a practice guideline publication such as a newsletter, magazine, journal that informs practice recommendations for transition service providers
3. Must relate to Autism Spectrum Disorder and the educational system, support professionals, disability service centers

Venues which were considered included a variety of magazines and newsletters advertised as reliable resources on the Autism Speaks website, an organization which values the needs, advocacy, and solutions related to ASD. Venues from Autism Speaks website which were considered include:

1. The Association for Science in Autism Treatment Newsletter
2. Autism: Sage Publications, Inc.
3. Autism File
4. Other Potential non-OT publication venues included:
5. American School Board Journal
6. Exceptional Children
7. Journal of Education and Learning
8. Focus on Children and other Development Disabilities
9. Education and Training in Autism and Developmental Disabilities

Graduate students reviewed the publication requirements of each listed venue to determine whether the content of the product met their stated requirements. The American School Board Journal was selected as the publication venue for publication as it was directed towards school board members and administrators who have the ability to impact change within their school system and current disability support services. This venue also places an emphasis on disseminating emerging trends in education and

solutions to educational obstacles from the level of the school as a system. This was deemed appropriate for the product as administrators have the ability to impact change within their school systems related to staffing (hiring OTs) and transition processes related to individuals who assist students with ASD. The article word requirements were also congruent with our current product word count.

The process of submission to this venue includes submitting the article via email to be reviewed by the publishers. Upon approval, students are required to include a brief biographical summary and contact information in the publication. The article must be 1,250 to 2,500 words in length to be considered for this journal. All copyrights must be offered to the publication venue.

CHAPTER IV

PRODUCT

To whom it may concern,

We are pleased to submit an article titled Postsecondary transition services for students with Autism Spectrum Disorder for publication in the American School Board Journal. We have reviewed current literature pertaining to the transition of high school students With

ASD and noted challenges they experience in transitioning to postsecondary educational settings. As master's level occupational therapy students working with our advisor Dr. Hanson, we recognize the instrumental contributions an occupational therapist might make to the transition process.

We recognize that the American School Board Journal places an emphasis on disseminating emerging trends in education and solutions to educational obstacles from the level of the school as a system. This article provides an overview of difficulties experienced by students with ASD in the transition process and highlights the role that occupational therapists can play. In addition, this article serves to Inform district level leadership about the benefit which occupational therapists can provide to students throughout high school student transition to a postsecondary institution after high school. District leaders have the ability to promote change in school systems. Through case illustration and description of an existing model of an existing transition program, district leaders can gain a vision for enhancement of existing transition services.

Some unique features of our article include:

1. A brief literature review about the state of transition services and the legal provisions acting as barriers for this population
2. An illustration of the challenges which students with ASD may experience during their postsecondary transition and the role of occupational therapy in the process through the use of a case study.
3. Review of the Bridge Program at Colorado State University provides a current model for implementation of OT services for transition planning for students with ASD.

Thank you for consideration of our work. Please address all correspondence concerning this manuscript to me at The University of North Dakota. Feel free to correspond with me by email at lynn.bielski@und.edu.

Sincerely,

Lynn Bielski, MOTS, Luke VanHavermaet, MOTS, Debra Hanson, PhD., OTR/L,
FAOTA University of North Dakota

Postsecondary transition services for students with Autism Spectrum Disorder: An occupational therapy approach

According to the Center for Disease Control (2016), 50% of individuals with Autism Spectrum Disorder (ASD) fall within average range or higher on intelligence tests, classifying them as “high functioning”. In fact, a recent study indicates that 12.1% of students in the United States diagnosed with ASD went on to attend a four year university, while 34.7% of students attended either a 2-year or 4-year institution (Shattuck et al., 2012). Ten years ago, Adreon & Durocher (2007) predicted that the number of students with ASD who attend a 2-year community college or 4-year university was going to continue to rise due to an overall increase in public awareness of the disorder, and recent improvements to the process of diagnosing symptoms related to High Functioning Autism Spectrum Disorder (HFASD). They suggested that community colleges would be a more supportive learning environment for students with HFASD to begin their postsecondary journey, in comparison to attending a four year university citing their unique ability to provide more individualized support, specialized trade experience, smaller campus and classroom sizes, and more flexible living arrangements. However, a more recent study conducted by Duncan and Bishop (2015) demonstrates that more than 50% of students with HFASD report no participation in postsecondary education or employment two years following high school, suggesting problems with the transition process from high school to college.

Current System for Transition to Postsecondary Education

The transition process from secondary to postsecondary institutions for students with Autism Spectrum Disorder is a complex process guided by both federal and state

law. Under the Individuals with Disabilities Education Act (IDEA, 2004), K-12 public schools must provide students with ASD free and appropriate accommodations necessary to maximize academic success through use of an Individualized Education Plan (IEP). When students turn 21 years old, they are no longer protected under IDEA, instead they are protected under the American's with Disabilities Act (ADA, 2008). Under ADA (2008) students who have been diagnosed with ASD are granted the right to "reasonable accommodations" at the postsecondary institution in which they enroll. However, students must independently seek out the institution's disability services center to receive these supports and accommodations. Due to common deficits with social skills and avoidance of social contact, students with HFASD may often be hesitant to disclose their diagnosis or self-advocate for their learning obstacles to support professionals at a postsecondary institution (Aderon & Durocher, 2007). Students lack of initiative to receive services from campus personnel may lead to difficulties acclimating to campus living. As students begin their transition from high school to a community college or university setting, an inability to understand the unwritten rules of college compared to those of high school may hinder students' success.

Case Example: Transitioning to College

John is an 18 year old male in Rural North Dakota. He was diagnosed with High Functioning Autism (HFASD) when he was 4 years old, and has had an IEP and Special Education team throughout his K-12 experience. John told his special education support team that he wants to attend school to become a machine operator. John's IEP team and family had a meeting to discuss his options to attend college, and decided that it would be a good option for him when he graduates in a few months. John's current IEP addresses

the following obstacles related to John's HFASD, but was not communicated to the college prior to transition:

- *John requires testing accommodations due to high anxiety caused by other class members using their pencils during exams.*
- *John's group discussions for class are done online to alleviate stress of social interaction with peers.*
- *John must seek help from his support professional when finding a new classroom or building that is not part of his normal routine.*
- *John requires that teachers initiate clarification questions regarding assignments.*
- *John is excited to attend a technical college, but he is concerned that staff at the college won't understand his needs, and he is anxious about disclosing his needs independently as he gets anxious in novel situations and around new people.*

The next fall, John made it to campus and attended classes for one semester before dropping out. John told his mother that he was "stressed out" by all of the people, the classroom changes, the noises during exams, the group discussion, and by driving to and from school on a new route every day. John said he was too embarrassed to tell anyone that he has a disorder, and that he didn't know where to begin to find someone to tell in the first place.

Need for Transition Services

Glennon (2016) asserts that there is a break in communication between high school advisors and postsecondary institution faculty and support professionals regarding students' academic, social and life skills needs. The researchers found only 21% of college support professionals are addressing the needs and accommodations for which

students with HFASD self-advocated and high school faculty may have mentioned. Student success is often determined by the college support personnel's ability to determine the best fit between the students' needs and educational goals by providing reasonable accommodations as necessary. Furthermore, Glennon (2016) approximated that 63% of faculty members demonstrated limited knowledge of the ADA and suggested they would benefit from further education on the provisions of this act. Occupational therapists have an opportunity to collaborate and educate high school and postsecondary institution faculty on the provisions of ADA to provide meaningful accommodations for students both in the classroom and in the campus community.

Role of OT in The Transition Process

The current education system emphasizes academic performance to define students' success throughout their K-12 journey. Students with ASD may flourish academically, and consequently go undiagnosed and without services to address social, emotional, and independent living skills necessary to participate in a dynamic postsecondary setting. An inability to develop independent living skills outside of academics can lead to students failing to meet their full educational and vocational potential as the context of college is more than just academics. OT practitioners can provide a unique set of services when addressing students' ability to interact during class discussion, initiating social relationships, asserting their needs and challenges to faculty members or navigating a dynamic and stimulating campus environment (Glennon, 2016).

Occupational therapy (OT) practitioners as well as Certified Occupational Therapy Assistants (COTA) have the ability to assist in the transition process. OT practitioners utilize a holistic approach to analyze the interaction between individuals and

their environment while completing their meaningful daily “occupations” also known as daily tasks or activities. The goal of OT is to holistically analyze the person, environment and occupations to evaluate the individual's motor and cognitive skills and his/her ability to interact with their environment to engage in desired occupations. Identifying each of these factors allows OT practitioners to identify relationships between the person’s mastered skills, required skills and environmental demands of an occupation, and the individual’s ability to interact within their dynamic environment. Once these transactions have been established, the practitioner can then apply modifications and accommodations necessary to improve the “fit” between the person, environment and occupation to facilitate engagement and success in a chosen occupation. This holistic view of the person and his or her environment is a valuable skill which OT practitioners bring to the IEP team. The IEP team often includes the student, teachers, special education personnel, guardians, psychologists, counselors or administrators. Collaboration among the student, OT practitioner, and IEP professionals would ensure that students’ emotional, social, and dynamic problem solving needs are being met, and that they continue to develop as they transition to a drastically different context from that of a high school environment.

Academic barriers to success for students with HFASD are addressed in the student’s IEP prior to postsecondary admission, and provide valuable information which would optimize a student’s postsecondary experience as well. Emphasizing the importance of a partnership between OT practitioners, IEP teams, and postsecondary support professionals beyond students’ high school graduation would ensure students are receiving adequate supports and modifications during their postsecondary journey.

Special education personnel's ability to develop students' learning strategies and modification implementation alongside OT practitioners' ability to build students' self-advocacy and independent living skills would greatly improve students' overall transition experience. A collaborative, team approach would promote academic success, confidence, and independence as students transition from a high school setting, to one of higher education. The following case study illustrates how OT practitioners analyze the person, environment and occupations to implement modifications for students with ASD to ensure that they are maximizing their academic, social, and independent living skills throughout the postsecondary transition process.

Case Example: Transitioning to College With OT Services

Prior to high school graduation, John met with his IEP team, and an OT to discuss barriers which may inhibit his success once he is no longer eligible to receive supports from his IEP team and IDEA. Prior to selecting a college, an OT practitioner with an understanding of John's habits, skills, and routines may recommend that he attends a 2-year community college as it offers small class sizes, individualized support, specialized trade programs and flexible living arrangements. After selection of the postsecondary institution the OT practitioner would further assist John with his transition process in the following ways:

- 1. Collaborate with educational supports, John, his IEP team, and college support professionals to discuss classroom accommodation needs (online discussion boards, testing accommodations, limiting group projects) prior to and throughout his postsecondary experience (Barhnill, 2016).*

2. *Assist John with the process of self-disclosure so that he understands how to seek out support services*
3. *Develop appropriate social skills so that he can develop meaningful relationships with faculty and peers*
4. *Establish independent living skills such as seeking out modes of transportation, basic financial management, navigating campus facilities, and developing a healthy daily routine*

When John arrived on campus in the fall, he reported that he felt prepared and confident to attend a new school, engage in new social activities, establish new routines, and to succeed academically. John continued to consult with his OT practitioner throughout his college experience, and eventually graduated with his desired degree.

Existing Model Program Illustrating the role of OT in Transition Services

As illustrated in the case study, the addition of an occupational therapist in the postsecondary transition ensures a holistic view of students and his/her environment to ensure they are succeeding in the areas of academics, social participation and independent living. The Center for Community Partnership (CCP) within the Colorado State University (CSU) Occupational Therapy Program provides a model of the occupational therapy role through their development of the “Bridge Program”, which provides postsecondary transition services to prospective CSU students with Autism Spectrum Disorder (CSUCCP, 2017). The program consists of a three-day transition program for students to develop relationships with peers and CSU faculty, learn to navigate the campus environment, introduce local public transportation routes and build students self-advocacy skills (CSUCCP, 2015).

The Future of OT Transition Services

Occupational Therapy practitioners are highly trained in evaluating contexts and activities to identify barriers which may inhibit an individual's success or participation such as deficits in social and independent living skills, which is often the case for students with ASD. Although individuals with ASD may flourish academically, difficulties with adapting to complex environments, avoidance of social contact and difficulties organizing a healthy daily routine raises concerns about students' ability to live independently following a highly structured and supportive environment in high school. These areas of difficulty create an opportunity for OT practitioners to apply their skills by improving students' self-advocacy skills, ability to develop meaningful relationships and develop a healthy daily routine to ensure that students can maximize their success both in the classroom and in the community.

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CHAPTER V

SUMMARY

An extensive literature review was completed on the postsecondary transition supports provided to students with Autism Spectrum Disorder (ASD) as well as student and postsecondary faculty members' perceptions of the accommodations and experiences of this population at post-secondary institutions. The review demonstrated a lack of evidence supporting transition services for the ASD population during the transition from high school and postsecondary educational settings. The literature reveals a lack of communication between high school and postsecondary support professionals to facilitate ASD student transition. The role of occupational therapy (OT) practitioners in relation to ASD student transition is explored including their ability to analyze students' skills, everyday contexts, meaningful occupations and design accommodations appropriate to student's skills and abilities. In addition, OT practitioner's knowledge of healthcare policy and their holistic view of individuals was noted as complementary to the services already provided by existing support professionals. Promotion of occupational therapy services to professionals who work in high school and postsecondary education settings was identified as a necessity in order to establish the role of occupational therapy in postsecondary transition services.

A scholarly article was created to promote the holistic approach which OT practitioners can bring to the transition process for students with ASD. The article includes a brief overview of the literature currently available which addresses areas such

as the prevalence and common symptoms of ASD, current legal and support systems in place, perceptions of students and faculty who experience or have experienced the postsecondary transition, and recommendations to enhance the success of this population in a postsecondary environment. A two-part case study was included in the article to illustrate the unique role which occupational therapists can play in providing students with the essential skills to not only thrive in academics, but demonstrate to independence with social participation, community involvement and independent living. The PEO model (Strong, 1999) was utilized to provide a holistic approach to the analysis of students' areas of difficulty when arriving to campus. Applying an occupation-based model allowed for recognition of factors affecting students' success outside of academics and identification of how the person and environment affect students' success in a variety of occupations. The article was submitted for publication to a non-OT professional venue to promote the unique skills which OT practitioners can provide to the transition team.

Limitations

Limitations were recognized while completing the literature review and designing the product on the topic of the postsecondary transition for students with ASD. The first limitation is that there is a lack of models demonstrating the value of occupational therapy services in transition planning for postsecondary education. The "Bridge Program" at Colorado State University is one of the few postsecondary transition programs to be implemented by OT practitioners, making it difficult to duplicate subsequent programs without evidence to support their effectiveness (CSUCCP, 2015). A second limitation is the misunderstanding of OT practitioners' role and scope of practice from other healthcare and human services professionals. OT practitioners are

highly skilled in assisting students in building their self-advocacy and independent living skills, but this realm of practice may go unrecognized due to an emphasis on only promoting academic success in the educational setting. Consequently, support professionals within a school system may only recognize the traditional OT practitioners' role as improving handwriting and a student's ability to regulate behavior in the classroom. Thus professionals may overlook the additional benefits which an OT can bring to an educational team. More qualitative research gathering the perspectives of students with ASD and the faculty who work with them would allow greater understanding of students'/faculty perceptions and challenges with the current transition process and insights regarding the skills which OT practitioners can offer on future transition teams.

Implementation

The review of literature and product designed in this scholarly project will be valuable in advocating for the role of occupational therapy in the postsecondary transition process for students with ASD. Publishing the scholarly article in a non-OT venue will allow other professionals who work with this population an opportunity to consider the unique role which occupational therapy can bring to a transition team. OT practitioners' holistic approach will improve students' ability to independently participate in the campus experience, maximize their academic potential and advocate for themselves in the community. The scholarly article has the potential to reach a wide variety of audiences overtime as it can be easily updated with the latest evidence, and it can be adapted to fit the specifications of various publications venues. Furthermore, this article can serve as a guide to promote OT services on transition teams for students with

disabilities other than that of ASD. However, the strict guidelines and requirements of each publication venue acts as a barrier to publication as many of the venues had requirements such as specific formats, word counts, content, etc.. Searching for additional venues whose criteria is congruent with the product's content or by changing the content included in the product are two ways to overcome this barrier of implementation.

Conclusion

Individuals with Autism Spectrum Disorder comprise a rapidly growing population with approximately 1/68 children being diagnosed annually (CDC, 2016). Individuals with ASD often have difficulties with social interaction, sensory processing, emotional regulation and adapting to environmental changes (Rogers, 2010). Individuals who are diagnosed early in life are provided with a wide variety of services to minimize these symptoms to maximize independence later in life, and in an academic setting. As individuals with Autism Spectrum Disorder come to the end of their K-12 education journey, the transition planning completed throughout the student's final year of high school are not carried out as support services are no longer required under law following graduation (IDEA, 2004). This lack of professional support following high school graduation may inhibit students' success and place distress on family members during the postsecondary transition.

OT practitioners can reduce these barriers by utilizing the PEO model to analyze the transactions between the person, environment and occupations and identify what areas are inhibiting students' success. Addressing students' academic success as well as their ability to interact appropriately during social situations, adapt to complex

environments, navigate campus and the community, and complete independent living skills will ensure students achieves their life goals and purpose. The product designed within this scholarly project acts as a tool to communicate the need to restructure the focus of the postsecondary transition process to factors other than solely academics. The product demonstrates the value which occupational therapists can bring to the transition process to build an individual's skills necessary for him/her to live independently in the community. Publishing the scholarly article in a non-OT venue will promote occupational therapists as potential leaders of the postsecondary transition process for students with ASD. In addition, the applicability and adaptability of the article will allow for the information included in the product to be shared with a variety of professionals who take part in the transition process.

Recommendations

The limitations of this study warrant future action and research in this area of concern as there is limited evidenced-based program models for OT practitioners to implement effective transition services for students with ASD. The literature review included in this study reveals that there is a need for continued research to capture the perceptions and experiences of both students and faculty to determine how transition services can be improved and how OT practitioners can be more involved in the process. For the OT practitioners who are currently providing innovative transition programs, it is crucial for them to record their interventions and outcomes as well as publish their results to strengthen the advocacy for OT services with this population. Gelbar, Smith and Reichow (2014) assert that there is a need to move beyond theoretically-based studies and begin focusing on empirically-based studies to provide solutions to the many

recommendations and challenges presented in a majority of studies completed on the ASD transition process. In addition, it will be important for OT practitioners to continue advocating for their services and for their scope of practice to other professionals who work directly with this population. Establishing a professional identity, which promotes OT practitioners' ability to apply a holistic approach to the transition process, will not only benefit the profession, but most importantly improve students' success and quality of life throughout their postsecondary journey.

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